

# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

## Trial Information

Trial Sponsor(s): FMC

Objective: Evaluate the efficacy and crop safety of Authority brand herbicides with and without metribuzin and similar competitor PRE herbicides in Enlist soybeans

Crop: Enlist Soybean

Variety: H2123E

Weed species (pressure): glyphosate-R waterhemp (high-very high)  
velvetleaf (low-moderate)  
fall panicum (moderate)

Herbicide Application(s): PRE – 5/24  
POST – 6/29 (V4 soybean)

---

For the full report see trial #22-BRO-SB13 in [the 2022 Wisconsin Weed Science Research Report](#)



**Cropping Systems Weed Science**  
UNIVERSITY OF WISCONSIN-MADISON



# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Trt #	Herbicide (rate acre <sup>-1</sup> )	Injury (%)		Waterhemp (%)					Fall Panicum (%)			Yield <sup>b</sup> bu acre <sup>-1</sup>
		6/14	6/29	6/14	6/29	7/13	7/26	9/29	6/29	7/26	9/29	
1	Untreated Check	0	0	0	0	0	0	0	0	0	0	31 b
<b>Two-Pass – PRE (5/24) fb POST<sup>c</sup> (6/29)</b>		<b>POST</b>					<b>POST</b>			<b>POST</b>		
2	Authority Supreme (8 fl oz)	0.3	3.5	100	88	96	90	97	97	95	99	70 a
3	Authority Supreme (8 fl oz) + Metricor DF (6 oz)	0.0	2.5	100	91	95	91	97	95	97	100	70 a
4	Authority Elite (25 fl oz)	0.0	2.3	99	83	92	89	92	95	91	97	67 a
5	Authority Elite (25 fl oz) + Metricor DF (6 oz)	0.0	2.5	99	82	93	91	98	96	96	99	70 a
6	Authority First (6.4 oz)	0.0	2.8	97	83	92	95	98	100	98	100	67 a
7	Authority First (6.4 oz) + Metricor DF (6 oz)	0.0	2.5	98	80	93	92	97	93	95	98	67 a
8	Kyber (1 pt)	2.5	3.0	100	93	99	98	100	96	99	100	66 a
9	Zidua PRO (6 fl oz)	0.0	4.0	100	84	94	90	98	97	96	98	69 a
10	Boundary (29 fl oz)	0.0	2.8	99	69	88	88	96	90	98	100	68 a
11	Anthem Maxx (4 fl oz)	0.0	3.3	99	83	93	91	96	92	98	99	65 a
12	Anthem Maxx (4 fl oz) + Metricor DF (6 oz)	0.0	3.0	100	90	96	92	96	90	98	99	68 a
LSD ( $\alpha=0.10$ )		0.3	ns	ns	8	3	ns	ns	ns	ns	ns	5
p value		<.001	.282	.165	.001	<.001	.112	.430	.748	.611	.580	<0.001

<sup>a</sup>Visual control from 70-100% is illustrated on a color scale with green representing greater weed control values.

<sup>b</sup>Yield values with the same letter are not significantly different.

<sup>c</sup>POST application - Enlist One (32 fl oz) + Roundup PowerMAX3 (32 fl oz) + AMS (8.5 lb/100 gal) applied to all treatments except the untreated check.

# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 6/14  
21 days after the PRE application

The number in the upper right-hand corner is the average % waterhemp control of 4 replications

**21 days after PRE (6/14)**

**Untreated Check**

**0%**



**21 days after PRE (6/14)  
PRE: 8 fl oz Authority Supreme**

**100%**



**21 days after PRE (6/14)**

**PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF**

**100%**



**21 days after PRE (6/14)  
PRE: 25 fl oz Authority Elite**

**99%**



21 days after PRE (6/14)

99%

PRE: 25 fl oz Authority Elite + 6 oz Metricor DF



**21 days after PRE (6/14)  
PRE: 6.4 oz Authority First**

**97%**



**21 days after PRE (6/14)**

**98%**

**PRE: 6.4 oz Authority First + 6 oz Metricor DF**



**21 days after PRE (6/14)**

**PRE: 1 pt Kyber**

**100%**



**21 days after PRE (6/14)**

**PRE: 6 fl oz Zidua PRO**

**100%**



**21 days after PRE (6/14)  
PRE: 29 fl oz Boundary**

**99%**



**21 days after PRE (6/14)  
PRE: 4 fl oz Anthem Maxx**

**99%**



**21 days after PRE (6/14)**

**PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF**

**100%**



**1**

# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 6/28

35 days after the PRE application  
1 day before the POST application

The number in the upper right-hand corner is the average %  
waterhemp control of 4 replications

**35 days after PRE (6/28)**  
**Untreated Check**

**0%**



**35 days after PRE (6/28)  
PRE: 8 fl oz Authority Supreme**

**88%**



35 days after PRE (6/28)

91%

PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF



**35 days after PRE (6/28)  
PRE: 25 fl oz Authority Elite**

**83%**



**35 days after PRE (6/28)**

**82%**

**PRE: 25 fl oz Authority Elite + 6 oz Metricor DF**



**35 days after PRE (6/28)  
PRE: 6.4 oz Authority First**

**83%**



35 days after PRE (6/28)

80%

PRE: 6.4 oz Authority First + 6 oz Metricor DF



35 days after PRE (6/28)

PRE: 1 pt Kyber

93%



35 days after PRE (6/28)

PRE: 6 fl oz Zidua PRO

84%



**35 days after PRE (6/28)  
PRE: 29 fl oz Boundary**

**69%**



**35 days after PRE (6/28)  
PRE: 4 fl oz Anthem Maxx**

**83%**



35 days after PRE (6/28)

90%

PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF



# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 7/13

50 days after the PRE application  
14 days after the POST application

The number in the upper right-hand corner is the average %  
waterhemp control of 4 replications

**50 days after PRE (7/13)**

**Untreated Check**

**0%**



**14 days after POST (7/13)**

**PRE: 8 fl oz Authority Supreme *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**96%**



**14 days after POST (7/13)**

**PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**95%**



**14 days after POST (7/13)**

**PRE: 25 fl oz Authority Elite *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**92%**



**14 days after POST (7/13)**

**PRE: 25 fl oz Authority Elite + 6 oz Metricor DF *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**93%**



14 days after POST (7/13)

PRE: 6.4 oz Authority First *fb*

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS

92%



**14 days after POST (7/13)**

**PRE: 6.4 oz Authority First + 6 oz Metricor DF *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**93%**



**14 days after POST (7/13)**

**PRE: 1 pt Kyber fb**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**99%**



**14 days after POST (7/13)**

**PRE: 6 fl oz Zidua PRO fb**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**94%**



**14 days after POST (7/13)**

**PRE: 29 fl oz Boundary *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**88%**



**14 days after POST (7/13)**

**PRE: 4 fl oz Anthem Maxx *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**93%**



**14 days after POST (7/13)**

**PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**96%**



# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 7/26

63 days after the PRE application  
27 days after the POST application

The number in the upper right-hand corner is the average %  
waterhemp control of 4 replications

**63 days after PRE (7/26)**  
**Untreated Check**

**0%**



**27 days after POST (7/26)**

**PRE: 8 fl oz Authority Supreme *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**90%**



**27 days after POST (7/26)**

**PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**91%**



**27 days after POST (7/26)**

**PRE: 25 fl oz Authority Elite *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**89%**



**27 days after POST (7/26)**

**PRE: 25 fl oz Authority Elite + 6 oz Metricor DF *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**91%**



27 days after POST (7/26)

PRE: 6.4 oz Authority First *fb*

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS

95%



**27 days after POST (7/26)**

**PRE: 6.4 oz Authority First + 6 oz Metricor DF *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**92%**



27 days after POST (7/26)

PRE: 1 pt Kyber *fb*

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS

98%



**27 days after POST (7/26)**

**PRE: 6 fl oz Zidua PRO fb**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**90%**



**27 days after POST (7/26)**

**PRE: 29 fl oz Boundary *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**88%**



**27 days after POST (7/26)**

**PRE: 4 fl oz Anthem Maxx *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**91%**



27 days after POST (7/26)

PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF *fb*

92%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 9/29

The number in the upper right-hand corner is the average % waterhemp control of 4 replications

**End of Season (9/29)**

**Untreated Check**

**0%**



**End of Season (9/29)**

**PRE: 8 fl oz Authority Supreme *fb***

**90%**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**



**End of Season (9/29)**

**PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF *fb***

**91%**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**



**End of Season (9/29)**

**PRE: 25 fl oz Authority Elite *fb***

**89%**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**



**End of Season (9/29)**

**PRE: 25 fl oz Authority Elite + 6 oz Metricor DF *fb***

**91%**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**



**End of Season (9/29)**

**PRE: 6.4 oz Authority First fb**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**95%**



**End of Season (9/29)**

**PRE: 6.4 oz Authority First + 6 oz Metricor DF fb**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**92%**



**End of Season (9/29)**

**PRE: 1 pt Kyber fb**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**98%**



**End of Season (9/29)**

**PRE: 6 fl oz Zidua PRO fb**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**90%**



**End of Season (9/29)**

**PRE: 29 fl oz Boundary *fb***

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**88%**



**End of Season (9/29)**

**PRE: 4 fl oz Anthem Maxx fb**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**91%**



**End of Season (9/29)**

**PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF fb**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

**92%**

